

Application No.: 09/849,457

Docket No.: JCLA6623

In The Specification:

Please amend following paragraphs.

--[0035] The formation of the active absorption layer 64 is shown in FIG. 3B. In FIG. 3B, the covering layer 62 has a recess region 66 formed at the predetermined location by, for example, photolithographic and etching processes in semiconductor fabrication. Then a vacuum evaporation process is performed to evaporate the chemical active absorbing material onto the recess region 66, thereby to form the active absorption layer 64. Here, the use of evaporation process is one of features in the invention. ~~Since, since~~ the evaporation process has automatically ensure the material having ability to absorb water or oxygen. That is because the material suitable for use in evaporation process intrinsically has properties of absorbing water or oxygen. The evaporation process has effectively simplified the fabrication consideration.--

--[0037] FIG. 5A-5B are cross-sectional drawings, schematically a packaging structure of an LED, according to another preferred embodiment of the invention. It is similar to the structure as shown in FIGs. 3A-3B, but the difference is that the covering layer 70 also does not need ~~needs no~~ a recess region. Instead, the active absorption layer 64 is evaporated on the covering layer 70. As the covering layer covers over the sealant layer 60, the active absorption layer 64 directly contacts on the sealant layer 60.--

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[0039] FIG. 7 is cross-sectional drawing, schematically a packaging structure of an LED, according to still yet another preferred embodiment of the invention. In FIG. 7, before the sealant layer 60 is formed, an insulating layer 68 can be formed to cover the metal cathode layer 56. Then, the sealant layer 60 is formed afterward. The covering layer 70, as previously described, covers on the sealant layer 60. There is no need to form an active absorption layer on the covering layer 70. In other words, the method as shown in FIG. 7 does not need ~~needs no~~ the active absorption layer. Instead, the insulation layer 68 directly covers the metal cathode layer 56, also resulting in prevention from contact with invading water or oxygen. Thereby, the insulating layer can also protect the metal cathode layer 56 from reacting with water or oxygen.--

[0040] According to the invention, the covering layer can also be designed with various structure. FIG. 8 is cross-sectional drawing, schematically a packaging structure of an LED, according to still yet another preferred embodiment of the invention. The structure shown in FIG. 8 includes a substrate 50. A light emitting device 80 is formed on the substrate 50. The light emitting device 80 at least includes the transparent anode layer 52, the LED material layer 54, and the metal cathode layer 56 as previously described. Moreover, a sealant can also be included. In this embodiment, the difference is the structure of the covering layer 82. As the covering layer 82 is etched to form the recess region, the outer peripheral region of the device is also etched to form a trench 8684. Likewise, an active absorption layer 64 is also formed within the recess region, for example, at the bottom portion. Another sealant layer 84 is coating on the covering layer 82, locating a portion between the recess region and the trench 86. Then the covering layer

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can be glued onto the substrate 50. Since the formation of the trench 86, the trench 86 can prevent the sealant from overflowing outward to the covering layer 84 during coating the sealant. If the sealant overflows outward outside of the device, when the device is finally cut, the edge would not be tidily cut, ~~and even would cause to~~ damage of the device.--

--[0042] Further still, FIG. 9A is bottom view drawing, schematically a packaging structure of an LED, according to still yet another preferred embodiment of the invention. FIG. 9B is a cross-sectional drawing with respect to FIG. 9A. In FIG. 9A, an active absorption layer 64 is formed on the covering layer 90 at the predetermined location with respect to the light emitting device 80. Similarly to FIG. 8, this embodiment needs no the etching process. Instead, an inner frit line 94 and an outer frit line 92 are coated at the periphery of the active absorption layer 64, in which there is a proper clearance between the inner and the outer frit lines.--

--[0043] In FIG. 9B, as the covering layer 90 covers over the light emitting device 80 on the substrate 50, sealant can be properly injected into the clearance between the frit lines 92 and 94. The sealant 84 can be dropped to structure of the clearance between the frit lines 92 and 94 associating with proper amount of sealant 84, ~~the sealant 84 can also be confined between the frit lines 92 and 94.~~ This can also effectively prevent sealant from be overflowed ~~overflowing~~ outside. In this embodiment, the sealant and the frit lines also produce ~~produces~~ the needed space to cover the light emitting device 80.--

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--[0044] In the ~~foregoing~~foregoing, the invention can effectively prevent the metal cathode from reacting with invading water or oxygen, and thereby prolong the lifetime of the product.

The method is simple also. Several advantages are as follows:--